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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/669,533	09/24/2003	Jeffrey A. Lucas	61605US003	4631
32692	7590	11/02/2006		
3M INNOVATIVE PROPERTIES COMPANY				EXAMINER
PO BOX 33427				CECIL, TERRY K
ST. PAUL, MN 55133-3427				ART UNIT
				PAPER NUMBER
				1723

DATE MAILED: 11/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/669,533	LUCAS ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Mr. Terry K. Cecil	1723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on 8-28-2006.

2a) This action is **FINAL**.                            2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 1-17 and 20-22 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-17 and 20-22 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) Notice of References Cited (PTO-892)  
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.

4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.

5) Notice of Informal Patent Application (PTO-152)

6) Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-17 and 20-22 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. The limitations added to each of the independent claims requiring a primary strand or a rib formation running in the machine direction does not find support in the application as originally filed and is considered to be new matter.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-17 and 20-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims are indefinite because of the following reasons:
  - The following terms lack antecedent basis: “the primary strand or rib formation” and “the machine direction (claims 1, 12, 13, and 22).

- Claims 2-11, 14-17 and 20-21 are also rejected since they suffer the same defects as the claims from which they depend.

***Claim Rejections - 35 USC § 103***

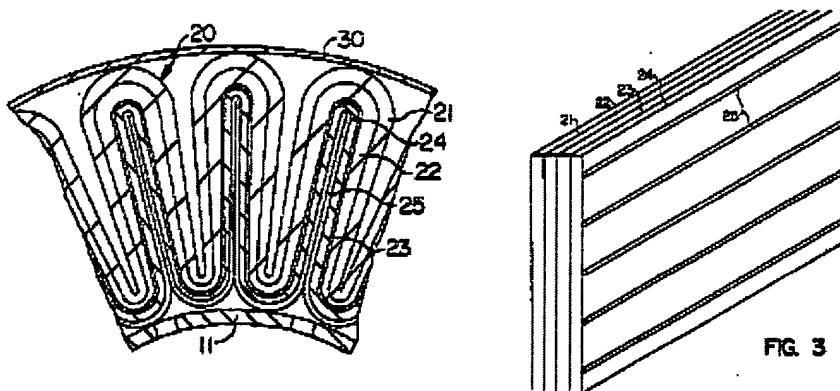
5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

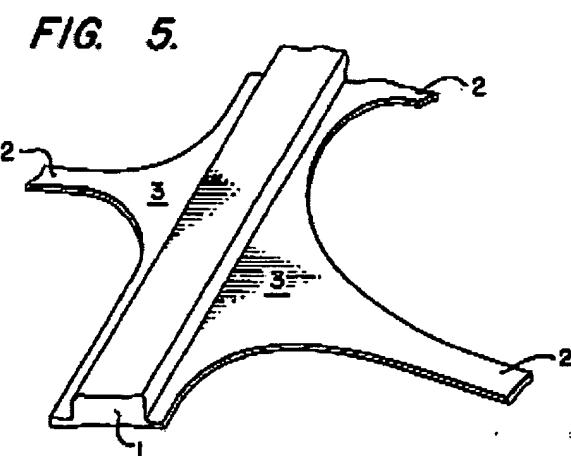
6. Claims 1-4, 6-7, 9-14, 16-17, and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller et al. (U.S. 5,552,048) in view of Rasmussen (U.S. 3,954,933).



Miller teaches a filter element including a filter media 23, an upstream support 21 and a multi-layer downstream support 22 and 24 (note that the cushioning layer can be between the filter

layer and either of the upstream and downstream supports, see col. 4, lines 17-21). The second downstream support layer 24 includes “ribs” 25 [as in claims 1, 6, 12, 13 and 22]. The cushioning layer (or first downstream support, see col. 8, lines 42-45) is a thin, highly porous, nonwoven, polyester layer made by a wetlaid process (col. 5, lines 29-46) [as in claims 7, 9-10, 14 and 16-17]. The examiner considers such a layer made by the same process and material disclosed by the applicant and having a thickness less than 100 microns yet being highly porous as having its surface contact points “minimized”. As shown in e.g. figures 1 and 6, the filter element includes a perforated core, an outer cage and end caps [as in claims 13 and 20-21]. The filter media is pleated to have longitudinally-extending, radial pleats [as in claims 2-3].

Although Miller teaches his second downstream support can be *any* woven or nonwoven material (col. 4, lines 39-40) and cites an extruded, apertured, polymeric, mesh having “ribs” 25 as an example, he doesn’t mention the layer being an extruded apertured film. However, such is taught by Rasmussen (U.S. 3,954,933). As shown in figure 5 below and also figures 2-3,



Rasmussen teaches a layer comprising an extruded, apertured, polymeric film having ribs 1 and portions 2, 3 between apertures [as in claims 1, 11, 13, and 22]. It is considered that it would have been obvious to one ordinarily skilled in the art at the time of the invention to have at least the

second downstream support layer of Miller to be the film layer of Rasmussen, since Rasmussen teaches the benefits of a reinforcement that is thin, strong, and inexpensive and that *can be used*

*in filters* (col. 1, lines 8-13). The direction of the rib shown in figure 5 of Rasmussen is taken by the examiner to be the “machine direction”.

As for claim 4, Miller teaches the filter media can be in the form of a membrane (col. 5, line 52). He also teaches that the membrane can be *any pore size* (col. 5, lines 58-59) but does not specifically teach a microporous membrane having a pore size of about 0.1 to about 10 microns. However, such would have been obvious to the skilled man depending upon the nature of the fluid being filtered, the nature and size of the contaminants in the fluid, and the acceptable pressure drop across the filter element—as taught by Miller (col. 5, lines 47-50).

7. Claims 5, 8 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over the modified Miller in view of Kawano et al. (U.S. 6,808,553). These claims add the limitations of a filter media of Teflon (PTFE), among others and the nonwoven support layer being laminated to the media. Kawano teaches a polyester, nonwoven, support layer laminated to a PTFE filter media (col. 1, lines 32-33; col. 4, lines 30-44). It is considered that it would have been obvious to one ordinarily skilled in the art at the time of the invention to have the first downstream support layer of Miller to be laminated a PTFE filter media, since Kawano teaches the benefit of such a laminate exhibiting a high collection efficiency compared with a glass fiber medium under the same pressure loss (col. 1, lines 32-35).

***Response to Arguments***

8. Applicant's arguments filed 8-28-2006 have been fully considered but they are not persuasive because of the following reasons:

- In order to distinguish the extruded mesh of Miller's downstream support material from the apertured film of applicant's support material, the applicant has amended the claims to require "a primary strand or a rib formation running in the machine direction". He argues that the primary strands made in a process to make an extruded mesh would necessarily run in a diagonal direction to the web direction. Firstly, applicant's new limitation is considered to be new matter. Though applicant seems to argue that such is an inherent structural result in a process to create an apertured film, he is reminded that "To establish inherency, the *extrinsic evidence* must make clear that the missing descriptive matter is *necessarily present* in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established *by probabilities or possibilities*. The mere fact that a certain thing may result from a given set of circumstances is not sufficient." In re Robertson, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999). Applicant has not presented any concrete extrinsic evidence that such characteristics are "necessarily present" in *all* apertured films. Secondly, Miller's support material is not limited to extruded mesh materials and specifically cites that the support can be any woven or nonwoven material (col. 4, line 39-40). Thirdly, Rasmussen does teach an apertured, polymeric film such that upon modification of Miller to include the film of Rasmussen, any alleged inherent characteristics would be present. In addition, the examiner contends that the benefits

cited by Rasmussen (i.e. reinforcement that is thin, strong, and inexpensive and that can be used in filters) are sufficient motivation for modifying the primary reference.

- Applicant's nesting configuration argued on page 10 is not claimed and does not find support in the originally-filed application.

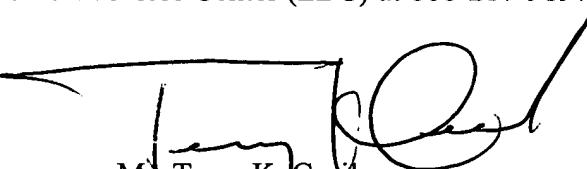
*Conclusion*

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Contact Information:

- Examiner Mr. Terry K. Cecil can be reached at (571) 272-1138 at the Carlisle campus in Alexandria, Virginia for any inquiries concerning this communication or earlier communications from the examiner. Note that the examiner is on the increased flextime schedule but can normally be found in the office during the hours of 8:30a to 4:30p, on at least four days during the week M-F.
- Wanda Walker, the examiner's supervisor, can be reached at (571) 272-1151 if attempts to reach the examiner are unsuccessful.
- The Fax number for this art unit for official faxes is (571) 273-8300.
- Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Mr. Terry K. Cecil  
Primary Examiner  
Art Unit 1723

TKC  
October 30, 2006